

1 2. (Previously Amended) The apparatus of claim 1 wherein said stainless steel
2 alloy has at least 15% chromium.

1 3. (Previously Amended) The apparatus of claim 1 wherein said stainless steel
2 alloy has less than 1% nickel.

1 4. (Previously Amended) The apparatus of claim 1 wherein said stainless steel
2 alloy is selected from the group consisting of stainless steel alloy 430, stainless steel alloy 440,
3 and stainless steel alloy 446.

1 5. (Unchanged) The apparatus of claim 1 wherein said phosphorous precursor
2 compound is TEPO, TMP or TEP.

1 6. (Unchanged) The apparatus of claim 1 wherein said phosphorous precursor
2 is TMP.

1 7. (Unchanged) The apparatus of claim 1 wherein said phosphorous precursor
2 compound is TEP.

1 8. (Previously Amended) An apparatus for delivering a liquid phosphorous
2 precursor compound, comprising:
3 a container adapted to hold said liquid phosphorous precursor compound;
4 a conduit configured to convey said liquid phosphorous precursor compound or
5 a gaseous product of said liquid phosphorous precursor compound from the container;
6 a heating surface coupled to at least one of a portion of said container and a
7 portion of said conduit;
8 wherein at least one of said portion of said container and said portion of said
9 conduit is composed of a stainless steel alloy having less than 5 percent nickel.

1 9. (Previously Amended) The apparatus of claim 8 wherein said stainless steel
2 alloy comprises at least 15% chromium.

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1 10. (Previously Amended) The apparatus of claim 8 wherein said stainless
2 steel alloy comprises less than 1% nickel.

1 11. (Previously Amended) The apparatus of claim 8 wherein said stainless
2 steel alloy is selected from the group consisting of stainless steel alloy 430, stainless steel
3 alloy 440, and stainless steel alloy 446.

1 12. (Unchanged) The apparatus of claim 8 further comprising a heater for
2 heating said heating surface to a temperature of 160-170 degrees Celsius.

1 13. (Unchanged) The apparatus of claim 8 wherein said apparatus is a bubbler
2 system for delivering gases to a chemical reaction chamber for semiconductor wafers.

1 14. (Unchanged) The apparatus of claim 8 wherein said apparatus is a boiler
2 system for delivering gases to a chemical reaction chamber for semiconductor wafers.

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1 15. (Previously Amended) The apparatus of claim 8 wherein said apparatus
2 comprises an injection system for delivering gases to a chemical reaction chamber for
3 semiconductor wafer fabrication, and wherein said injection system includes an injection
4 valve composed of a stainless steel alloy having less than 5 percent nickel.

1 16. (Previously Amended) The apparatus of claim 8 wherein said portion
2 composed of the stainless steel alloy comprises a gasket and a seal.

1 17. (Unchanged) The apparatus of claim 8 wherein said phosphorous precursor
2 compound is TEPO, TMP or TEP.

1 18. (Unchanged) The apparatus of claim 8 wherein said phosphorous precursor
2 is TMP.

1 19. (Unchanged) The apparatus of claim 8 wherein said phosphorous precursor
2 compound is TEP.

1 20. (Previously Amended) A liquid flow injection valve for supplying TEPO,
2 TMP or TEP to a chemical vapor deposition (CVD) chamber comprising:
3 an injection orifice for connecting to a source of liquid TEPO, TMP or TEP;
4 and
5 a valve outlet for delivering a gaseous mixture generated from said liquid
6 TEPO, TMP or TEP to said CVD chamber,
7 said injection orifice including a stainless steel alloy having less than 5%
8 nickel.

1 21. (Previously Amended) The valve of claim 20 wherein said stainless steel
2 alloy has at least 15% chromium.

1 22. (Previously Amended) The valve of claim 20 wherein said stainless steel
2 alloy is selected from the group consisting of stainless steel alloy 430, stainless steel alloy
3 440, and stainless steel alloy 446.

1 23. (Unchanged) The valve of claim 20 further comprising a heater for heating
2 said valve to a temperature of 160-170 degrees Celsius.

1 24. (Unchanged) The valve of claim 20 further comprising a plug in said valve
2 composed of a polyamide.

1 25. (Unchanged) The valve of claim 24 wherein said polyamide is Vespel.

1 26. (Unchanged) A liquid injection system for a CVD chamber comprising:
2 a container for holding liquid TEPO, TMP or TEP;
3 an injection valve for converting said liquid TEPO, TMP or TEP into
4 gaseous form, said injection valve having portions in contact with said liquid TEPO, TMP or
5 TEP composed of a stainless steel alloy having less than 5% nickel and at least 15%
6 chromium;
7 a liquid TEPO, TMP or TEP injection line coupling said container to
8 said injection valve;

9 a carrier gas source line coupled to said injection valve; and
10 an outlet line coupling said injection valve to said CVD chamber.

1 27. (Unchanged) The system of claim 26 wherein said stainless steel alloy is
2 one of stainless steel alloys 430, 440 and 446.

1 28. (Unchanged) A method for injecting gaseous phosphorous precursor
2 into a chemical vapor deposition chamber, the method comprising:

3 providing a liquid TEPO, TMP or TEP through an injection valve including a
4 stainless steel alloy having less than 10% nickel;

5 providing a carrier gas through said valve;

6 creating a pressure differential in said valve; and

7 heating said injection valve.

1 29. (Unchanged) The method of claim 28 further comprising the step of heating
2 said valve to a temperature of 160-170 degrees Celsius.

1 30. (Unchanged) The method of claim 29 wherein said valve is heated to
2 approximately 165 degrees Celsius.

1 31-45. PREVIOUSLY CANCELED

1 46. An apparatus for use with a liquid phosphorous precursor compound, the
2 apparatus comprising:

3 a container adapted to [hld] hold the liquid phosphorous precursor compound;
4 a conduit; and

5 an orifice disposed between the liquid container and the conduit, wherein at
6 least one of the liquid container, the orifice, and the conduit has a surface of a stainless steel
7 alloy having less than 10 % nickel.

REMARKS

Claim 46 has been amended; and claims 1-30 remain unchanged. Thus, claims 1-30 and 46 are pending.